

SATNAVS

STREETS
AHEAD

With a satnav, your days of struggling with maps and of tetchy arguments over missed turnings are history. We test a broad range of GPS devices, kits and software to help you find your way to a bargain

INTRODUCTION

With a decent satnav device you need never get lost again, and now is a great time to buy, whatever your budget. For those with a lot of money to spend, the high-end kit we review here has more features than ever, and includes extras such as a restaurant guide, a first-aid book and a camera.

If your budget is tighter, there's no reason to miss out. For less than £150 you can get similar performance and features to those of the pricier models, but with a smaller screen.

If you've got a smartphone, you don't need to bother with a standalone device. The kits we review here turn your phone into a fully functional satnav, so you have to carry only one device around.

We've put 11 standalone devices and three smartphone kits to the test, throwing wrong turns and obscure directions at them, and trying all their features to help you find out which is best for you.

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IT Correspondent



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Choosing a...
Satnav

There are two main kinds of satnav: standalone devices and smartphone kits. Standalone devices are the most common. They incorporate a screen, storage for maps and an integrated GPS receiver. Just attach them to your windscreen or dashboard, and you're ready to go. As standalone devices are devoted exclusively to the job of navigation, they are normally the most hassle-free option. We've reviewed 11 of these.

Smartphone kits can turn your mobile phone into a satnav device if it uses one of the more popular operating systems, such as Nokia's Symbian system or Windows Mobile. Our table on page 126 tells you which operating systems the kits we've reviewed require. We've reviewed three of these kits.

SOFT OPTIONS

All the maps in the systems reviewed come from just two companies: TeleAtlas and NavTeq. The software each device uses to show the map data is an important consideration. If it's underpowered or too complicated, the device will be hard to use on the road. Equally, if the software doesn't give proper instructional icons, it can be difficult to tell which turning you should take. Our reviews tell you which devices have the best software.

The units in this group come with either European or UK and Ireland maps. However, most European models can be bought for less with just UK maps, and most UK models are available with European maps for a little extra. Check the manufacturer's website for full details to get the model that suits your needs.

TRAFFIC AND ROADBLOCKS

If you find yourself sitting in traffic, a good GPS system is exceedingly useful. Simply tell it that you've found a roadblock and it will take you off the road at the next opportunity. Our reviews tell you which models do the best job.

Some of the devices here provide traffic information. The most basic is the Traffic Message Channel (TMC) service, as found on the NavMan and ViaMichelin devices. This service uses the FM band to send traffic messages to your GPS device, and it's free. Our table tells you which devices you can upgrade to use this system.

The TomTom, Navicore and Wayfinder systems can connect to your phone via Bluetooth and use it as a modem to download traffic news from the internet. Remember, you'll have to pay for data downloaded, but the results are usually more accurate.

STANDALONE SATNAVS

MAGELLAN Maestro 3100

★★★★

£114 inc VAT



The Maestro 3100 is the cheapest standalone satnav here, and it is reasonably impressive for the price. It runs the same software as Magellan's Maestro 4040 (opposite), and although it doesn't offer high-end features such as traffic information or Bluetooth compatibility, it's a reasonable navigational aid.

It performed pretty well in our in-car test. The touch screen isn't particularly responsive and the speakers are a little tinnier than those on its bigger brother, but the voice output isn't garbled. Likewise, the maps aren't particularly feature-heavy and are among the least attractive here, but they offer a good amount of detail and street names.

The roadblock button appears on the very first screen you come to when you tap the touch screen, which makes it easy to find an alternative route while you're stuck in traffic. The screen also splits in two when you reach a junction, giving you a picture of the junction based on the Navteq mapping software, which makes it easy to tally what you've seen on road signs with what's happening on the screen.

Unfortunately, the Maestro 3100 proved painfully slow in some of our tests, and asking the device to find a new route caused a delay of up to half a minute. This is fine if you're sitting in your driveway planning your route before setting off, but little use if you're in moving traffic. As a very basic GPS device, the Maestro 3100 will get you where you need to go without being overly confusing, but for this price you'd be better off with Mio's DigiWalker C220.

SUMMARY

- ✓ Good value
- ✗ Slow to reroute

STANDALONE GPS Integrated
SiRFstar III receiver, Magellan
NavStreets 26 software, UK and
Ireland maps
PART CODE 980934-01
SUPPLIER www.handtec.co.uk
DETAILS www.magellangps.com

MIO DigiWalker C220

★★★★★

£130 inc VAT



The DigiWalker C220 is our pick of the budget devices. It costs just £130, and it runs the excellent MioMap v3 software, which you also get if you buy the considerably more expensive DigiWalker C520 (opposite). You miss out on many of the C520's extras, including a picture viewer, MP3 player and Bluetooth, but as a device for getting you from A to B, the C220 excels.

During our in-car tests we found it a little slower than its bigger brother, which showed in our performance tests. The 3½in screen is bright and responsive, and we liked the excellent onscreen QWERTY keyboard. Not only does this make entering place names easy, but the software removes letters from the keyboard as your typing eliminates possible matches from the list of place names. Making a spelling mistake is harder, which cuts down the chances of being directed to the wrong place. We also appreciate the City Centre button, which is useful if you want to visit a city for shopping, for example, but don't have a particular address.

Some of the C520's flaws have made it into the C220: roundabouts are problematic, and appear as a generic icon with the number of the exit you need in the middle. The Magellan satnavs handle roundabouts much better by showing an enlargement of the junction you're approaching based on actual map data. Fortunately, voice prompts are loud and clear, and its instructions are never mystifying. If you're looking for GPS on a tight budget, you can't get better than this.

SUMMARY

- ✓ Great value; clear keyboard
- ✗ Navigation icons not all clear

STANDALONE GPS Integrated
SiRFstar III receiver, MioMap 3
software, UK and Ireland maps
PART CODE MIO-C220
SUPPLIER www.handtec.co.uk
DETAILS www.mio-tech.be

GARMIN nuvi 200

★★★★

£170 inc VAT



The nuvi 200 offers a pretty similar experience to Garmin's nuvi 250W (opposite). The standard-aspect 2.8in touch screen is a little less luxurious, but the software is identical. You get all the same added extras including a picture viewer, currency converter and a unit converter, but you also get the same navigation niggles. There are no onscreen turn icons; instead, large arrows are overlaid on the road you're driving along. You can get detailed turn information by pressing the bottom right of the screen, but you sacrifice the moving map. The nuvi 200 doesn't tell you how far you have to go before your next action, so you could be in trouble if you mis-hear a voice prompt.

In fairness, the nuvi 200 handled our bad-tempered driving with aplomb, recalculating the route quickly when we missed turns and took random wrong turnings. The device itself is well designed, and the screen is excellent. It's perfectly visible in bright sunlight, and the maps, although rendered in slightly odd shades of pastel, are easy to read, and include street names. We also appreciate the roadblock function: tap Menu and then Detour, and the nuvi 200 calculates a route around the present road. This is very useful if you find yourself stuck in traffic.

The voice prompt isn't very specific, however, and uses units of distance such as '0.2 miles', which is much harder to visualise than a prompt given in yards. The TomTom and Mio units offer more detail about what you need to do next. At this price there are better GPS devices available.

SUMMARY

- ✓ Excellent screen
- ✗ Poor onscreen information

STANDALONE GPS Integrated
SiRFstar III receiver, Garmin City
Navigator NT 2.4 software, UK and
Ireland maps
PART CODE 010-00621-10
SUPPLIER www.supertrader.co.uk
DETAILS www.garmin.co.uk

TOMTOM One 3rd Edition Europe

★★★★★

£180 inc VAT



TomTom has a reputation for producing excellent GPS devices. However, the One 3rd Edition includes few extras, which is disappointing at this price. There's no Bluetooth and no way of getting the device to download traffic information from the internet via a mobile phone. There's no memory card slot or socket for an external patch antenna, which you might need if your windscreen is athermic (heat-resistant). You don't get any fancy applications such as picture viewers or MP3 players, either. The One is about as straightforward as you can get.

However, it's more responsive than many of the more expensive units in the group. It acquitted itself nicely in our in-car tests. The map slides by smoothly, and voice prompts are given in plenty of time. Maps are also perfectly clear, and the onscreen display gives you not only a moving map, but also turn information, including what you need to do next and when you'll be expected to do it. It's perfect if you're unfamiliar with the area.

The 3½in screen is also good and is visible in strong sunlight. Our only complaint is that its small size means the keyboard is similarly crushed, so typing an address is tricky. The roadblock facility is good, though. You can tell the One how far ahead the hold-up is and it will recalculate your route. We also liked the Help Me feature, which allows you to get a phone number for a local garage.

TomTom's One is good value for a satnav with European maps, but if you're happy with UK maps then Mio's DigiWalker C220 is better value.

SUMMARY

- ✓ Good screen; fast
- ✗ Poor keyboard

STANDALONE GPS Integrated
SiRFstar III receiver, TomTom One
software, Europe maps
PART CODE 1N01.010
SUPPLIER www.morecomputers.co.uk
DETAILS www.tomtom.com

GARMIN nuvi 250W

★★★★

£200 inc VAT



Garmin's slim 4.3in widescreen nuvi 250W looks great and has Europe-wide map coverage. If you mainly drive in the UK, though, you can buy the identical nuvi 200W with just UK and Ireland maps for around £30 less.

The nuvi 250W is a spectacular-looking device for the price, with bevelled edges and a 4.3in widescreen that is easy to view in all lighting conditions. The maps appear in bright pastel shades and include street names, even in the 3D navigation mode. We also appreciated the loud, clear speaker, which announces upcoming turns in plenty of time.

Unfortunately, the map display lacks other details. It's essential, for instance, for a satnav device to include an icon for your next action – an indicator for 'turn left', for instance – but the nuvi 250W only gives you audio turn instructions until you're virtually on top of the next turn. There's also no distance information, so you can't tell how far ahead your next turn is. This works fine if you're alone in the car and paying attention to the voice prompts, but if you've got a car full of people or the radio on, you could well miss an instruction.

The map is rendered well and zooms in as you approach a turn, so that you can see the junction clearly.

Arrows showing the route are displayed clearly across the top, but we still prefer the more informative displays of TomTom's devices.

With gorgeous looks, Europe-wide mapping and an excellent screen, the nuvi 250W is great value. But poor onscreen information and a reliance on voice prompts means that there are better devices here.

SUMMARY

- ✓ Excellent screen
- ✗ Poor onscreen information

STANDALONE GPS Integrated GPS receiver, Garmin City Navigator NT 2.3 software, Europe maps
PART CODE 010-00656-02
SUPPLIER www.expansys.com
DETAILS www.garmin.co.uk

MAGELLAN Maestro 4040

★★★★

£209 inc VAT



Magellan's Maestro 4040 is surprisingly cheap for a 4.2in widescreen satnav, but it includes plenty of features to keep users happy. It doesn't offer Traffic Message Channel services by default, but Bluetooth is included, so you can make hands-free calls while driving. There's no data compatibility, though, so you can't download traffic information.

The map display doesn't look particularly good, as it lacks detail. The Maestro 4040 is faster than the cheaper Maestro 3100, but only just, and it uses the same software. The screen divides into two as you approach a junction, and the junctions displayed on the screen are accurate representations from the maps, which is useful for complex turns. The roadblock feature is easy to access, which means you can quickly instruct the 4040 to find another route if you're stuck in traffic.

The touch screen isn't particularly responsive but it gets the job done, and we had no trouble seeing what was happening onscreen, even in bright sunlight. There are a few slight annoyances, such as the fact that the 4040 talks to tell you which menu you've just selected. There's no need for the 4040 to say 'Destination country' when that's exactly what you're trying to select.

If you want a widescreen navigation device on a tight budget, the Maestro 4040 is a good product and slightly better than Garmin's more attractive nuvi 250W. If you can stretch your funds a little further, though, you'll get more features with Mio's DigiWalker C520.

SUMMARY

- ✓ Good value; good screen
- ✗ Maps lack detail

STANDALONE GPS Integrated SiRFstar III receiver, Magellan NavStreets 26 software, Europe maps
PART CODE 980920-02
SUPPLIER www.handtec.co.uk
DETAILS www.magellangps.com

MIO DigiWalker C520

★★★★★

£229 inc VAT



Want to know what it would be like to be given directions by the computerised equivalent of Jeeves? Then try the DigiWalker C520, which has the poshest voice prompts we've heard. The DigiWalker C520 is one of the most powerful devices in the group, with a 400MHz processor powering a wealth of useful functions. The map slides smoothly around the bright 4.3in screen. This displays the distance to the next turn at the top, along with a generic icon to tell you what happens next.

Getting your destination into the DigiWalker with the responsive touch screen is simple. The QWERTY keyboard is excellent, and we like the way the keys disappear as your typing cancels out possible locations, making it hard to enter a wrong name. A City Centre button lets you aim for the heart of a city if you don't have a specific address. In our in-car tests, the DigiWalker C520 gave voice prompts with plenty of warning, and we were never in any doubt as to what to do. It even gives the name of the street you need to take.

The only annoyance is that it displays roundabouts as a generic blue roundabout icon with a number in the middle to tell you which exit to take. Miscount the exit and you could make a wrong turn. The number in the middle of the icon is also hard to see when the screen is in its low-contrast night mode. There's plenty to like, though: it can make calls using your mobile phone via Bluetooth, for example, although it can't use GPRS to get traffic details.

The DigiWalker C520 is impressive. It isn't cheap and, overall, we prefer TomTom's user interface, but its range of features still make it a good choice.

SUMMARY

- ✓ Good touch screen; fast
- ✗ Icons not always clear

STANDALONE GPS integrated SiRFstar III receiver, MioMap 3.3 software, Europe maps
PART CODE MIO-C520
SUPPLIER www.clove.co.uk
DETAILS www.mio-tech.be

VIAMICHELIN Navigation X-970T

★★★★

£231 inc VAT



ViaMichelin is perhaps best known for its hotel and restaurant guides, and it's pleasing to see both making an appearance in the Navigation X-970T. Places of interest marked on the maps include not only the usual petrol stations and supermarkets, but also abridged guides for restaurants and hotels. It's a handy feature, but otherwise the Navigation is underwhelming. For £231 we'd expect a larger screen than the 3½in LCD, and the navigation software is distinctly lacklustre.

The maps lack detail, and the default display doesn't have a map at all. Instead, the Navigation simply tells you what to do next. To that end, you get a progress bar and a pie chart, which fills depending on how far you are from your next turn. Turns pop up on the screen as they actually appear on the mapping software, while another progress bar tracks your progress towards the turn. It's effective, but without a good map it's hard to tell where you are. If the Navigation gets it wrong, you may not detect the error until you arrive in the wrong town.

We asked it to find Smallridge, a tiny village in Devon, and were rewarded with a pleasant but unwanted trip to Sidmouth. No other unit failed to find the village. It does provide TMC traffic updates, which Navman's 590i and ViaMichelin's Navigation X-980T also have, as well as Bluetooth for using the Navigation as a hands-free kit. For this price, however, you can get more features, better navigation software and a far superior screen elsewhere.

SUMMARY

- ✓ TMC traffic updates
- ✗ Poor onscreen infos and maps

STANDALONE GPS Integrated SiRFstar III receiver, ViaMichelin Navigation 6.5 software, Europe maps
PART CODE PNIX970TV6EUR
SUPPLIER www.totalpda.co.uk
DETAILS www.viamichelin.co.uk

STANDALONE SATNAVS/SMARTPHONE KITS

TOMTOM Go 520

★★★★★

£260 inc VAT



The Go 520 may be expensive, but it's hard to see how TomTom could have made it any more desirable. TomTom's navigation and mapping software is excellent. Onscreen instructions are clear, with precise details on what to do next and when to do it.

The 4.3in widescreen is simply excellent, and the touch screen is responsive. The onscreen keyboard can be set to QWERTY mode, although it's not quite up to Mio's levels of cleverness. However, there's plenty more on offer. The Bluetooth feature allows you to connect your mobile phone, not only for hands-free voice calls and text messages, but to download traffic information over a data connection as well. The software also includes country guides, first aid information and even a smattering of help with troubleshooting your car.

Besides using the onscreen keyboard, you can enter place names with voice recognition. This proved unreliable, and as the 520 isn't listening all the time, you can't instruct it to avoid a roadblock by speaking to it. The 520 was excellent in our in-car tests, and had no trouble getting us to obscure places. Voice prompts were given clearly in plenty of time, and we were never in any doubt as to what we needed to do.

The high price buys you plenty of computing power, and the device recalculated routes almost instantaneously after our abrupt wrong turns. The TomTom 520 isn't just the best-looking satnav here, it has the most complete and easy-to-use software and masses of features. It's our Best Buy satnav.

SUMMARY

- ✓ Excellent screen; very fast
- ✗ Expensive

STANDALONE GPS Integrated SiRFstar III receiver, TomTom Navigator software, UK/Ireland maps
PART CODE 1M00.560
SUPPLIER www.pcwib.com
DETAILS www.tomtom.com

VIAMICHELIN Navigation X-980T

★★

£285 inc VAT



The Navigation X-980T looks as if it comes straight out of the 1980s; its chunky rubberised plastic and big buttons make it look decidedly dated. It looks particularly ungainly next to the other models in the group, as all the other manufacturers have made an effort to make their devices look stylish.

It's hard to reconcile the unit's arguably ugly looks with its very high price, but ViaMichelin has at least managed to squeeze in some decent features. You get a mobile phone application and Bluetooth connectivity, so you can use the X-980T as a hands-free kit. There's also an integrated TMC receiver for real-time traffic updates. And, like the unit's smaller brother, the X-970T, you get Michelin's famous restaurant guides.

Sadly, and also in common with the smaller X-970T, the X-980T's navigation software is decidedly below par. Not only is it little better-looking than the device itself, but its maps are much harder to read than those on TomTom's devices. The X-980T uses plenty of progress bars to let you know when you have to turn, but without good onscreen maps, it's hard to know whether the ViaMichelin is sending you in the right direction.

There's no single element that damns the X-980T, but it's expensive and doesn't offer the same ease of use as TomTom's devices. It comes with European maps, but these are available on TomTom's far superior Go 520 for around the same price.

SUMMARY

- ✓ TMC traffic updates
- ✗ Poor onscreen info and maps

STANDALONE GPS integrated SiRFstar III receiver, ViaMichelin Navigation 6.5 software, Europe maps
PART CODE PN980TV6EURFR
SUPPLIER www.innovationsuk.org
DETAILS www.viamichelin.co.uk

NAVMAN S90i

★★★★

£300 inc VAT



The S90i is Navman's latest GPS device. It's so new, in fact, that we had to forgive a few problems with our pre-production review unit. Navman claims the final unit will be significantly faster than ours, which is just as well, as we found ourselves waiting ages for it to recalculate routes during our wrong turn tests.

Otherwise, the S90i has some of the best features here. It has TMC built in, which only the ViaMichelin Navigation devices also offer. You get Bluetooth for using the S90i as a hands-free kit, although there's no facility for a data connection to your phone. Intriguingly, Navman has installed a tiny mobile phone-style camera on the back of the S90i. Slide back the cover and press the button on the top of the unit and you can take a snap: the S90i saves the image (there's an SD/MMC card slot in case you find you take a lot of photos) and its location. You can then navigate using your picture library. Navman claims the final camera will offer better quality than the rather average one in our test unit.

The operating system is good, and the S90i's 4.3in widescreen display is responsive and gave us no visibility problems. Voice prompts were clear, and instructions were given in plenty of time. We also like the display information. For example, approach a roundabout and the S90i gives you an icon of the roundabout as it actually appears in the mapping data.

The only drawback is the price. For this much money you could have the excellent TomTom 520, which has similar features apart from TMC and the camera.

SUMMARY

- ✓ TMC; camera; excellent screen
- ✗ Expensive

STANDALONE GPS Integrated SiRFstar III receiver, Navman SmartST 2008 software, Europe maps
PART CODE AA008385
SUPPLIER www.globalpositioning-systems.co.uk
DETAILS www.navman.com

WAYFINDER Navigator 7

★★★★

£179 (around £122 inc VAT)



Wayfinder's Navigator 7 smartphone kit doesn't include an installation CD. Instead, the instruction book directs you to a website that you access from your phone. This could be expensive if your phone provider charges a lot for data calls, but at least it more or less guarantees that the software is up to date and compatible with your handset. Check Wayfinder's website for a handset compatibility list.

The rest of the kit is comprehensive and includes mains and car chargers for the GPS receiver, plus a lanyard for carrying it, and an adjustable dashboard mount. The software is reasonably fast, calculating a short London drive in just under eight seconds. The GPS receiver is equally capable, picking up a signal in under a minute from startup. The voice prompts are accurate and given in plenty of time. By default, Wayfinder shows only directions for what you should do next. This is just as well, as the maps lack detail and, even on a fairly new Windows Mobile phone, watching the map drag around the screen was a sobering experience compared with the smoothness of some of the standalone units.

The maps themselves are downloaded as you need them. This means you save memory space on your phone, but your data charges will be higher, particularly if you use Wayfinder abroad. This is definitely only for users with an unlimited data tariff. However, you might also have problems when you try to use the Wayfinder somewhere with no mobile internet coverage. It's an interesting idea, but we prefer ALK's CoPilot Live 7.

SUMMARY

- ✓ Up-to-date software
- ✗ Slow; poor map detail

GPS KIT Bluetooth SiRFstar III receiver, Wayfinder Navigator 7 software, UK, Ireland maps
PART CODE N/A
SUPPLIER www.wayfinder.com
DETAILS www.wayfinder.com

NAVICORE Personal 2007

★★★★

£130 inc VAT



Navicore's Personal 2007 is similar to ALK's CoPilot Live 7. The box contains a CD with the software and maps, and a Bluetooth GPS receiver. You'll need to provide your own memory card for the 256MB installation, though. Unlike CoPilot Live, there's no memory card reader in the box to make things easier.

Once installed, the kit is fairly impressive. You can attach the GPS receiver to a lanyard, although we had trouble getting a signal when we were on foot. In a car the experience is a little better (although there's no mounting system for the receiver) and the software is very good.

You get 2D and 3D mapping, as well as spoken prompts for directions, and the software supports seven-digit postcodes. We experienced no real problems during our in-car tests, and no performance issues with our Symbian mobile phone, although how smoothly Navicore runs on your hardware will depend on your exact configuration.

There are a few niggles, though. In pedestrian mode, the software still assumes that you can use one-way streets only one way. Planning a journey on foot can be annoying for other reasons, too. It will send you out of your way to circumnavigate a park that you could just as easily walk through.

Navicore's Personal 2007 has a similar range of features and hardware to ALK's CoPilot Live 7 and it's a little cheaper. However, it's not as accomplished or as easy to use, and the pedestrian mode is frustrating.

SUMMARY

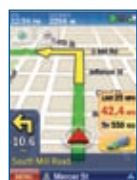
- ✓ Good value
- ✗ Haphazard pedestrian mode

GPS KIT Bluetooth SiRFstar III receiver, Navicore 2007 software, Europe maps
PART CODE N/A
SUPPLIER www.mobilefun.co.uk
DETAILS www.navicoretech.com

ALK CoPilot Live 7

★★★★★

£150 inc VAT



ALK's CoPilot Live 7 is a traditional smartphone satnav system. You get a Bluetooth GPS receiver and the maps you need on a CD. Helpfully, you also get a USB dongle with memory card slots for all the major memory card formats you'll find in a mobile phone. Installation is simple, and the software itself is the best here. The entire system is designed to be used at arm's length and without a stylus.

The maps are bright and detailed, and we really like the details displayed onscreen; the distance to your next turn and exactly what you need to do are both useful touches. The map also zooms in as you approach a junction. Voice prompts are given in plenty of time, and we had no problems with missed turns during our tests.

Our review version came on T-Mobile's GPS-enabled MDA Compact III handset, and we had no speed problems in our tests. CoPilot Live 7 also comes with some decent accessories, including a USB car charger for the GPS receiver and a dashboard mount.

We liked CoPilot's community features. You can download map data and POI data via the internet, using other people's information to spice up your journeys. The CoPilot system also offers revised routes for those without cars and you can tell it whether you're on foot or on a bike, which will be a boon for orienteers.

ALK's CoPilot Live 7 is an accomplished product with a good range of features, and is our pick of the smartphone options.

SUMMARY

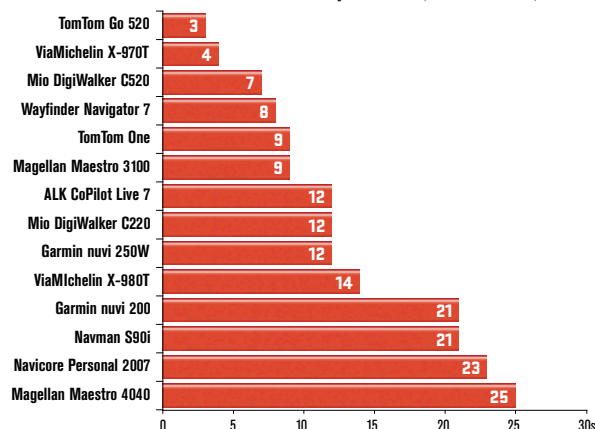
- ✓ Fast; easy to install
- ✗ Expensive

GPS KIT Bluetooth SiRFstar III receiver, CoPilot Live 7 software, UK, Ireland maps
PART CODE N/A
SUPPLIER www.clove.co.uk
DETAILS www.copilotlive.co.uk

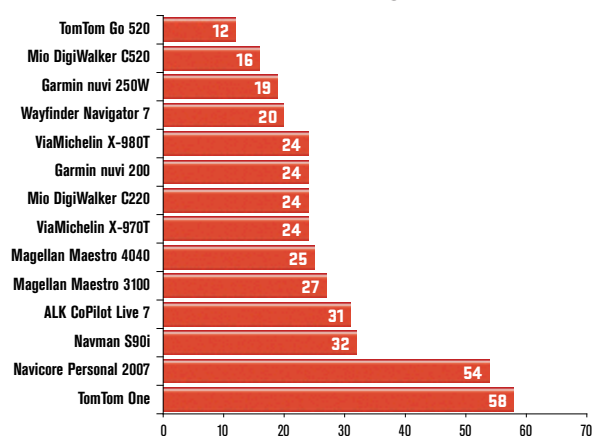
BENCHMARKS

Route calculations Calculation time

London W1 to Clapham (seconds)



London W1 to Edinburgh (seconds)



Our benchmarks show how quickly each GPS can plan a route for a short and a long journey. Fast route calculation saves you time before you set off but is also important if a wrong turn forces a recalculation en route. We time one journey from our office in central London to Clapham in south London, and one to the centre of Edinburgh.

Labs verdict GPS devices

We were very impressed by the GPS devices we tested this month. At the cheapest end of the scale, we liked Mio's DigiWalker C220. We used it extensively and encountered no problems in our driving tests. At just £130 it's an absolute steal and it wins our Budget Buy award.

TomTom's mapping software is the best here, and the company's One is the quickest sub-£200 system. However, it has a basic specification. We're also fans of Mio's DigiWalker C520, which does virtually everything you could ask of it in a beautiful package.

But the undisputed winner is TomTom's Go 520. Its design is stunning, and the screen is superb. We had no problems at all with it during our driving tests, and it's incredibly fast. The accompanying software is also excellent, and the 520 comes with tons of features, including Bluetooth and guide books. It's our Best Buy.

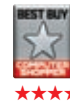
If you've got a smartphone, ALK's CoPilot Live 7 is a great bit of software. Unfortunately, at £150 it's also expensive, and its price prevented it from winning an award.

STANDALONE GPS UNITS



BUDGET BUY
MIO
DigiWalker
C220

★★★★



BEST BUY
TOMTOM
Go 520

★★★★★



STANDALONE GPS DEVICES



MANUFACTURER	GARMIN	GARMIN	MAGELLAN	MAGELLAN	MIO	MIO	NAVMAN
Model	nuvi 250W	nuvi 200	Maestro 3100	Maestro 4040	DigiWalker C220	DigiWalker C520	S90i
Rating	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★
HARDWARE							
Type	Standalone GPS	Standalone GPS	Standalone GPS	Standalone GPS	Standalone GPS	Standalone GPS	Standalone GPS
Compatible operating system	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Display	4.3in, 480x272	2.8in, 320x240	3.5in, 320x240	4.3in, 480x272	3.5in, 320x240	4.3in, 480x272	4.3in, 480x272
Connectivity	USB	USB	USB	Bluetooth, USB	USB	Bluetooth, USB	Bluetooth, USB
Memory card type	SD	SD	SD/MMC	SD	SD/MMC	SD/MMC	SD/MMC
Memory card included	None	None	None	None	None	None	None
GPS receiver	integrated (not listed)	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III
Accessories	Car charger, windscreen mount	Car charger, windscreen mount	Car charger, windscreen mount, USB cable	Car charger, windscreen mount, USB cable	Car charger, windscreen mount, USB cable	Mains/car charger, windscreen mount, USB cable, protective case	Car charger, windscreen mount, USB cable
Camera	N/A	N/A	N/A	N/A	N/A	N/A	2.0MP
Extras	Calculator, picture viewer, currency converter, unit converter, world clock	Calculator, picture viewer, currency converter, unit converter, world clock	None	Bluetooth phone application	None	MP3 player, picture viewer, address book, calculator	Bluetooth phone application
Size	72x122x20mm	71x97x20mm	88x109x290mm	95x129x22mm	81x108x24mm	81x126x20mm	81x140x21mm
Weight	173g	147g	184g	240g	110g	190g	198g
MAPPING							
Navigation software	Garmin City Navigator NT 2.3	Garmin City Navigator NT 2.4	Magellan NavStreets 26	Magellan NavStreets 26	MioMap 3	MioMap 3.3	Navman SmartST 2008
Map data	Navteq	Navteq	Navteq	Navteq	TeleAtlas	TeleAtlas	TeleAtlas
Countries covered	Europe	UK, Ireland	UK, Ireland	Europe	UK, Ireland	Europe	Europe
Traffic information	None	None	None	Optional TMC	Optional TMC	Optional TMC	TMC
Toll road warning	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Roadblock avoidance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PERFORMANCE							
W1 to Clapham	12s	21s	9s	25s	12s	7s	21s
W1 to Edinburgh	19s	24s	27s	25s	24s	16s	32s
BUYING INFORMATION							
Price inc VAT	£200	£170	£114	£209	£130	£229	£300
Supplier	www.expansys.com	www.supertrader.co.uk	www.handtec.co.uk	www.handtec.co.uk	www.handtec.co.uk	www.clove.co.uk	www.globalpositioning systems.co.uk
Details	www.garmin.co.uk	www.garmin.co.uk	www.magellangps.com	www.magellangps.com	www.mio-tech.be	www.mio-tech.be	www.navman.com
Part code	010-00656-02	010-00621-10	980934-01	980920-02	MIO-C220	MIO-C520	AA008385



SMARTPHONE GPS

MANUFACTURER	TOMTOM	TOMTOM	VIAMICHELIN	VIAMICHELIN	ALK	NAVICORE	WAYFINDER
Model	Go 520	One 3rd Edition Europe	Navigation X-970T	Navigation X-980T	CoPilot Live 7	Personal 2007	Navigator 7
Rating	★★★★★	★★★★	★★	★★	★★★★	★★★	★★★
HARDWARE							
Type	Standalone GPS	Standalone GPS	Standalone GPS	Standalone GPS	GPS kit	GPS kit	GPS kit
Compatible operating system	N/A	N/A	N/A	N/A	Windows Mobile 5, Windows Mobile 6	Symbian Series 60, Symbian Series 60 3rd Edition, Symbian Series 80, UIQ3	BlackBerry, Windows Mobile 5, Symbian, Sony Ericsson
Display	4.3in, 480x272	3.5in, 320x240	3.5in, 320x240	4.3in, 480x272	N/A	N/A	N/A
Connectivity	Bluetooth, USB	USB	Bluetooth, USB	Bluetooth, USB	Bluetooth	Bluetooth	Bluetooth
Memory card type	SD	N/A	SD	SD	N/A	N/A	N/A
Memory card included	none	none	2048MB	2048MB	none	none	none
GPS receiver	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III	integrated SiRFstar III	Bluetooth SiRFstar III	Bluetooth SiRFstar III	Bluetooth SiRFstar III
Accessories	Car charger, windscreen mount, USB cable	Car charger, windscreen mount, USB cable	Mains/car charger, windscreen mount, USB cable, external TMC antenna	Mains/car charger, windscreen mount, USB cable	Car charger, windscreen mount	Mains/car charger	Car charger, windscreen mount, USB cable
Camera	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Extras	Bluetooth phone application, MP3 player, document reader, picture viewer, first aid guide, country guides, traffic regulations guides, repair and maintenance guides	None	Bluetooth phone application	None	None	None	None
Size	83x118x24mm	82x96x25mm	80x108x20mm	83x250x27mm	N/A	N/A	N/A
Weight	220g	174g	198g	260g	N/A	N/A	N/A
MAPPING							
Navigation software	TomTom Navigator	TomTom One	ViaMichelin Navigation 6.5	ViaMichelin Navigation 6.5	CoPilot Live 7	Navicore 2007	Wayfinder Navigator 7
Map data	TeleAtlas	Navteq	TeleAtlas	TeleAtlas	Navteq	TeleAtlas	TeleAtlas
Countries covered	UK, Ireland	Europe	Europe	Europe	UK, Ireland	Europe	UK, Ireland
Traffic information	GPRS, optional TMC	Optional TMC	TMC	TMC	None	GPRS	GPRS
Toll road warning	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Roadblock avoidance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PERFORMANCE							
W1 to Clapham	3s	9s	4s	14s	12s	23s	8s
W1 to Edinburgh	12s	58s	24s	24s	31s	54s	20s
BUYING INFORMATION							
Price inc VAT	£260	£180	£231	£285	£150	£130	£122
Supplier	www.pcvb.com	www.morecomputers.co.uk	www.totalpda.co.uk	www.innovationsuk.org	www.clove.co.uk	www.mobilefun.co.uk	www.wayfinder.com
Details	www.tomtom.com	www.tomtom.com	www.viamichelin.co.uk	www.viamichelin.co.uk	www.copilotlive.co.uk	www.navicoretech.com	www.wayfinder.com
Part code	1M00.560	1N01.010	PNX970TV6EUR	PNX980TV6EURFR	N/A	N/A	N/A